CLAIMS

1. An operating screw comprising:

a core having a rotation axis; and

an outer member enclosing the core and formed with a spiral groove;

wherein the outer member includes a first slide surface which has a center of curvature residing on the rotation axis and has a predetermined radius of curvature, the outer member also including a first retreat surface which is spaced apart from the rotation axis by a distance smaller than the radius of curvature of the first slide surface.

2. The operating screw according to claim 1, wherein the outer member is made of a resin material by injection molding.

3. The operating screw according to claim 1, wherein the first retreat surface is flat.

4. The operating screw according to claim 1, wherein the outer member includes a second slide surface which has a center of curvature residing on the rotation axis and has a radius of curvature equal to the radius of curvature of the first slide surface.

5. The operating screw according to claim 4, wherein the first slide surface and the second slide surface are spaced from each other about the rotation axis, the first retreat surface being disposed between the first slide surface and the second slide surface.

6. The operating screw according to claim 1, wherein the outer member includes a flat second retreat surface separated from the first retreat surface by the spiral groove.

7. The operating screw according to claim 6, wherein the first and the second retreat surfaces are aligned with each other based on a reference line parallel to the rotation axis.

8. The operating screw according to claim 7, wherein the spiral groove has a maximum width at a position corresponding to the reference line.

9. The operating screw according to claim 8, wherein the spiral groove is provided with a cutout at a position corresponding to the reference line to realize the maximum width.

10. A driving mechanism comprising:

an operating screw provided with a spiral groove and a spiral projection defined by the spiral groove; and

a hollow cylindrical carriage provided with threads coming into engagement with the spiral groove;

wherein the spiral projection is provided with both a plurality of curved surfaces spaced from each other and a plurality of flat surfaces alternating with the curved surfaces.

11. The driving mechanism according to claim 10, further comprising a guide rod parallel to the operating screw and a slider slidable on the guide rod, wherein the carriage is linked to the slider.

12. A printer comprising;

a photosensitive drum;

a charging corona wire arranged along the drum;

a cleaning member held in contact with the corona wire; and

a driving mechanism that moves the cleaning member longitudinally of the corona wire;

wherein the driving mechanism includes an operating screw provided with a spiral projection, the spiral projection including both a plurality of curved surfaces spaced from each other and a plurality of flat surfaces alternating with the curved surfaces.